RTC6 Software – Revision History (as of 2022-07-22)

Current Software Package: RTC6_Software_Package_Rev.1.14.1_2022_07_22.zip

RTC6DRV.sys	6.1.7600.16385	2015-05-20
Software Package	1.14.1	changed from 1.14.0
RTC6DAT.dat	604	unchanged
RTC6RBF.rbf	634	changed from 633
RTC6OUT.out	635	changed from 634
RTC6ETH.out	635	changed from 634
RTC6DLL.dll RTC6DLLx64.dll	634	changed from 633
RTC6conf	1.2.2.0	unchanged

Notation:

B Bugfix
C Change
N New

Revisions

Rev.	DLL	OUT	ETH	RBF	DAT	BIOS	BIOS-ETH	RTC6conf	Date
1.3.0	606	606	*	611	601	21	*	-	2017-09-11
1.3.1	607	607	607	611	601	22	*	-	2017-11-09
1.3.2	608	608	608	611	601	22	22	-	2018-01-23
1.3.3	608	608	608	612	601	22	22	-	2018-04-19
1.4.1	609	609	609	614	601	23	23	1.0.1.0	2018-08-03
1.4.2	610	610	610	615	602	23	23	1.0.1.0	2018-11-15
1.4.4	611	611	611	615	603	23	24	1.0.1.0	2019-03-01
1.5.0	614	614	614	619	603a	23	25	1.1.0.4	2019-07-26
1.5.2	615	615	615	621	603a	23	25	1.1.0.5	2019-09-11
1.6.0	616	616	616	622	603a	23	25	1.1.0.5	2019-11-25
1.6.1	617	617	617	623	603a	23	25	1.1.0.5	2020-02-07
1.7.0	618	618	618	623	603a	23	26	1.1.0.5	2020-03-13
1.7.1	618	618	618	623	603a	23	26	1.1.0.5	2020-03-19
1.7.3	619	619	619	624	603a	23	27	1.1.0.5	2020-06-19
1.7.4	620	620	620	625	603a	23	27	1.1.0.5	2020-07-10
1.7.5	621	621	621	625	603a	23	27	1.1.0.5	2020-07-24
1.7.6	622	622	622	625	603a	23	28	1.1.0.5	2020-10-02
1.7.7	623	623	623	626	603a	23	28	1.1.0.5	2020-12-11
1.7.8	624	624	624	627	603a	23	28	1.1.0.5	2021-01-22
1.7.9	625	625	625	628	603a	23	28	1.1.0.5	2021-02-05
1.7.10	625	626	626	628	603a	23	28	1.1.0.5	2021-02-26
1.7.11	626	627	627	629	603a	23	28	1.1.0.5	2021-04-30
1.7.12	627	628	628	629	603a	23	29	1.1.0.5	2021-07-09
1.9.0	628	629	629	630	603a	23	30	1.2.0.0	2021-09-03
1.10.0	629	630	630	631	603a	23	31	1.2.0.0	2021-10-15
1.11.0	630	631	631	631	603a	23	32	1.2.0.0	2021-11-12
1.12.0	631	632	632	632	604	23	33	1.2.1.0	2021-12-22
1.13.0	632	633	633	633	604	23	33	1.2.1.0	2022-02-08
1.14.0	633	634	634	633	604	23	34	1.2.2.0	2022-06-03
1.14.1	634	635	635	634	604	23	35	1.2.2.0	2022-07-22

* cannot be updated in the field/version cannot be queried

Firmware RTC6RBF.rbf Version 600 to Version 601

N:	Initial.

Firmware RTC6RBF.rbf Version 601 to Version 602

(Intermediate version 602 wasn't an official release)

C:	Internal changes only.

Firmware RTC6RBF.rbf Version 602 to Version 603

C: status word	Auxiliary bits PowOK, TempOK, PosAck, ASC are available.
N: RTC6 cycle synchronization	The RTC6 cycle can be synchronized to external laser pulses having a frequency of an integer multiple of 100 kHz.

Firmware RTC6RBF.rbf Version 603 to Version 604

(Intermediate version 604 wasn't an official release)

C:	Internal changes only.

Firmware RTC6RBF.rbf Version 604 to Version 605

(Intermediate version 605 wasn't an official release)

N: set_laser_power, peripheral outputs to control laser power	The laser power can be set by set_laser_power synchronous to the LaserOn delay. This supports long LaserOn delays with short vectors as well as the excelli*SCAN* scan head.
B: RS232	RS232 input could lose data.
B: Encoder	Encoder numbers had been interchanged. One of them counted into the wrong direction.

Firmware RTC6RBF.rbf Version 605 to Version 606

C: Laser power	Between two vectors as well as within poly lines a change of the laser power will be executed synchronous to the corresponding marking.
C: Parameterized mark commands	The parameter gets outputted synchronous to LaserOn.

Firmware RTC6RBF.rbf Version 606 to Version 607

C: Laser delays	The laser delays are now handled with a resolution of 1/64 µs (see set_laser_delays, set_sky_writing_para).
N: Pixel mode	Supports now also excelli*SCAN* systems.

Firmware RTC6RBF.rbf Version 607 to Version 608

(Intermediate version 608 wasn't an official release)

B: Laser control	Several internal bugs removed.

Firmware RTC6RBF.rbf Version 608 to Version 609

(Intermediate version 609 wasn't an official release)

C: Pixel mode	Generalized pixel mode.

Firmware RTC6RBF.rbf Version 609 to Version 610

(Intermediate version 610 was a preliminary release for RTC6eth)

C: In general	Internal reorganization.

Firmware RTC6RBF.rbf Version 610 to Version 611

N: Master/Slave	Master/Slave functionality implemented.

Firmware RTC6RBF.rbf Version 611 to Version 612

B: LaserOff Timing	Under circumstances a LaserOff delay could be missed. The laser kept switched on for a jump.

Firmware RTC6RBF.rbf Version 612 to Version 613

(Intermediate version 613 wasn't an official release version)

C: Master/Slave	Functionality improved.
C: get_sync_status	Extended with error returns.
N: master_slave_config	Configures the master/slave connection of a board.
C: Automatic laser control	Improved control of HalfPeriod (geometrically constant spot distance).

Firmware RTC6RBF.rbf Version 613 to Version 614

B: Polylines	Under circumstances changes of the laser power within a polyline could erroneously be addressed to the next following vector.

Firmware RTC6RBF.rbf Version 614 to Version 615

B: get_encoder, read_encoder, wait_for_encoder, encoder reset	As of version 614 FlyScale-scaled encoder values have been returned or used. Reset did not function for Encoder Y.
B: Automatic laser control: SDC (SpotDistanceControl)	At very high speeds the spot distance has been calculated incorrectly.
B: pixel mode	With long pixel lines (> 2.56 ms) pixel data could have been lost. After cancelling the pixel line by stop_execution or /STOP the next pixel line didn't function correctly.
B: Laser control	After set_timelag_compensation in conjunction with other commands for laser control the laser signal could have been controlled incorrectly. especially excelli*SCAN*: with sequences of many short marks and jumps it could happen that the laser remained on for a jump.

Firmware RTC6RBF.rbf Version 615 to Version 616

(Intermediate version 616 wasn't an official release version)

C: UART	Replaces previous RS232 (higher baud rate possible).

Firmware RTC6RBF.rbf Version 616 to Version 617

(Intermediate version 617 wasn't an official release version)

C: Encoder	PreviewTime corrected encoder values for excelli*SCAN*.

Firmware RTC6RBF.rbf Version 617 to Version 618

(Intermediate version 618 wasn't an official release version)

C:	Internal Changes.

Firmware RTC6RBF.rbf Version 618 to Version 619

C: Master/Slave	Improved functionality. Synchronizes automatically. Call of sync_slaves no more necessary.

Firmware RTC6RBF.rbf Version 619 to Version 620

(Intermediate version 620 wasn't an official release version)

Firmware RTC6RBF.rbf Version 620 to Version 621

C: General	Internal changes.

Firmware RTC6RBF.rbf Version 621 to Version 622

C: General	Internal changes.
N: Laser control	SubCycleSwitching, only for laserDESK and RTC6AddOnDll
B: Laser control	Pulse Picking Number was only updated if additional laser control parameters were written at the same time.

Firmware RTC6RBF.rbf Version 622 to Version 623

B: set_control_mode	Despite set bit #1, the queue of external starts was not completely cleared.
B: set_ext_start_delay	Sometimes the external start was not executed after the track delay had expired.

Firmware RTC6RBF.rbf Version 623 to Version 624

B: Laser control	In special timing situations extended mark vectors could be output due to faulty processing of the LaserOff delay.

Firmware RTC6RBF.rbf Version 624 to Version 625

B: Laser control	With activated pulse completion it could happen that Laser1 pulses continued to be output after a pixel line was interrupted.

Firmware RTC6RBF.rbf Version 625 to Version 626

B: set_laser_power	An additional latch signal could be issued on the first call to load_program_file.
B: set_scanahead_params	The LaserON signal could be output incorrectly if the command was called without excelliSCAN connected.

Firmware RTC6RBF.rbf Version 626 to Version 627

C: Laser control	Internal changes.

Firmware RTC6RBF.rbf Version 627 to Version 628

C: Laser control	Internal changes.

Firmware RTC6RBF.rbf Version 628 to Version 629

C: Laser control	Internal changes.

Firmware RTC6RBF.rbf Version 629 to Version 630

B: Laser control	In special timing situations, incorrect pixel lines could be output.

Firmware RTC6RBF.rbf Version 630 to Version 631

B: set_laser_power	In special timing situations, the power change between two mark commands could occur to early.

Firmware RTC6RBF.rbf Version 631 to Version 632

C: General	Internal changes.

Firmware RTC6RBF.rbf Version 632 to Version 633

B: Laser control	In special timing situations, the LaserON signal could stay on after a mark or pixel line.

Firmware RTC6RBF.rbf Version 633 to Version 634

N: write_port_list	New command to output analog/digital values. With the parameter NoDelay the value can be output before the PreviewTime elapsed.

DSP Program RTC6OUT.out Version 600 to Version 601

N:	Initial.
N: set_dsp_mode	Mode = 3: no automatic scanner delay adjustment. Mode = 2: RTC5 compatibility.

DSP Program RTC6OUT.out Version 601 to Version 602

N: set_laser_power, peripheral outputs to control laser power	The laser power can be set by set_laser_power synchronous to the LaserOn delay. This supports long LaserOn delays with short vectors as well as the excelli*SCAN* scan head.
B: Sky Writing mode 2	Within a sequence jump_∗ → set_end_of_list → auto_change → arc_∗ the arc has been marked incorrectly. Within a sequence laser_on[_pulses]_list → jump_∗ the laser remained switched on during the jump.
C: set_auto_laser_control	Mode = 6: automatic laser power control with combined galvanometer and encoder speed. Mode <n>+16: excelli*SCAN* support. Mode <n>+32: Correction file-dependent galvanometer speed correction (converting from angle bits to image field bits).
B: rs232_read_data	The command could lose data.
B: MOF and start_loop	Any of the set_fly_∗ commands switched off start_loop.
B: set_wobbel_mode	After switching from classical wobbel figures to the “freely definable wobbel figures” the latter possibly could have been executed incorrect.
B: mark_ellipse_abs, mark_ellipse_rel	For positive LaserOnShift values being an integer multiple of 10 µs, an ellipsis command was not terminated in sky-writing mode.

DSP Program RTC6OUT.out Version 602 to Version 603

C: set_laser_delays,	LaserOnDelay and LaserOffDelay are now handled with a resolution of 1/64 µs.
C: set_sky_writing, set_sky_writing_para	LaserOnShift and TimeLag are now handled with a resolution of 1/64 µs.
B: set_pixel_line	Did not reset the z step size back to 0.

DSP-Program RTC6OUT.out Version 603 to Version 604

(Intermediate version 604 wasn't an official release)

N: set_pixel_line, set_pixel_line_3d, set_pixel, set_n_pixel	Generalized pixel mode with optional outputs at AnalogOut1, AnalogOut2, pulse length, 8-Bit port, 16-Bit port and frequencies up to 3.2 MHz.
B: Laser pulse length	Even though softstart isn't implemented, under some circumstances the restart counter was activated and the laser pulse length was overwritten with an undefined value.
C: Short list commands	The maximum number is limited to 8 (compared to 12 with the RTC5). The maximum of 2 preceding a normal list command persists.
N: RTC6ETH.out	DSP version for RTC6eth boards.

DSP-Program RTC6OUT.out Version 604 to Version 605

(Intermediate version 605 was a preliminary release for RTC6eth)

N: excelliSCAN	excelli*SCAN* with firmware versions ≥ 5.05.7 are supported.
C: set_control_mode	Bit #4 = 1 suppresses simulate_ext_start_ctrl.
B: range_checking	Didn't work correctly for positions returned from an intelli*SCAN*.
B: get_z_distance, get_galvo_controls	Subsequent movement could have started with a wrong position.
C: stepper_disable_switch	Suppresses the functionality of an end switch, for example, with rotating axes.
C: set_scanahead_laser_shift	An offset of 20 µs is automatically added for internal signal run time compensation.
B: set_delay_mode, set_delay_mode_list	The option DirectMove3D didn't work correctly with all cases.

DSP-Program RTC6OUT.out Version 605 to Version 606

B: In general	Internal timing improved. Some commands didn't work correctly, for example, set_timelag_compensation.
B: Automatic laser control	The position-dependent automatic laser control can now also be used together with excelli*SCAN*.

DSP-Program RTC6OUT.out Version 606 to Version 607

C: set_trigger	Signal = 52 added: Time stamp counter.
B: bounce_supp	Bounce suppression was not effective.
B: get_head_status	PosAck signal of Head A was wrong.
B: *SCAN*ahead support	V < Vmax is now guaranteed in all cases.

DSP-Program RTC6OUT.out Version 607 to Version 608

C: ANALOG_IN	AD converting is now available.
B: mark_text, mark_text_abs	Failed to function.
B: list_repeat, list_until	Didn't repeat correctly, if the loop was placed within the protected memory of „list 3".

DSP-Program RTC6OUT.out Version 608 to Version 609

N: set_pause_list_cond	Conditional pause_list instead of a stop_execution.
N: set_defocus_offset[_list]	Globally effective offset to all defocus settings.
N: list_call_repeat, list_call_abs_repeat	Like list_call or list_call_abs, but with arbitrary repetition.
C: set_trigger, set_trigger4, get_value, get_values	Signals 53 (wobbel amplitudes) and 54 (I²C-AnalogIn) as well as 55, 56, 57 (fly correction) added.
B: Vector-defined laser control	With Ctrl = 1 and 2 (AnalogOut) values had been scaled faulty and overrunning values had been clipped faulty.
C: get_sync_status	Now in addition to the master/slave synchronization status also error bits are returned.
C: Automatic laser control	Improved HalfPeriod control (geometrically constant spot distance), excelli*SCAN* systems only.
N: spot_distance, spot_distance_ctrl	Defines the to-be-controlled constant geometrical spot distance.
B: Automatic laser control	excelli*SCAN*: Changing the marking speed was immediately effective instead of delayed by preview time.
C: Sky-Writing mode 3, polygon delay	Angle calculation is now entirely in 3D.
C: Micro vector commands	Laser delays now automatically take the preview time delay into account.
B: set_timelag_compensation	Waiting for „Not HEAD_BUSY" was infinite.
N: set_port_default_list	Like set_port_default, but a list command.
B: fly_return_z	Z was interpreted as a 16 bit value even with set_rtc6_mode.

DSP-Program RTC6OUT.out Version 609 to Version 610

N: set_pause_list_not_cond	Conditional pause_list instead of a stop_execution.
N: set_scanahead_speed_control	Controls scanner delays depending on the target or actual achievable speed.
B: list_call, list_call_abs	As of version 609 the function has been repeated “Address” times.
N: activate_fly_xy_encoder, activate_fly_2d_encoder	Activates a Processing-on-the-fly session with an encoder offset.
C: set_trigger, set_trigger4	Period < 31 bits, bit #31 = 1 activates endless triggering with ring buffering.
B: Pixel mode	With long pixel lines (> 2.56 ms) pixel data could have been lost. After cancelling the pixel line by stop_execution or /STOP the next pixel line didn’t function correctly.
B: XY-coordinates (sample values)	Coordinates far off the real image field (also after a fly correction) have been clipped incorrectly.
B: set_wobbel_vector	As of version 609 the amplitudes have been scaled too high by a factor of 32.

DSP-Program RTC6OUT.out Version 610 to Version 611

B: set_fly_rot	Did not work, when called immediately after load_program_file. (workaround: call set_fly_x(1.0) first.
B: set_laser_pin_out_list	Caused an erroneous laser control timing.
B: get_z_distance	Used current Z position instead of the Z parameter.
B: Automatic laser control	Because of a reconstruction of the position dependent laser control to an excelli*SCAN* compatible version the automatic laser control scaled wrong, as long as a table has not been explicitly loaded by load_position_control (see RTC6DAT.dat version 603).
C: set_scanahead_speed_control	In version OUT 610 the laser delays have not been correspondingly adjusted.
B: Sky-Writing mode	Only with *excelliSCAN*: at slow speeds the run-ins could have been lasted very long.
C: mark_ellipse_abs, mark_ellipse_rel	Ellipses can now also be executed with *excelliSCAN* in sky-writing mode.

C: LaserOn delay	excelli*SCAN* with auto delays activated only: Now the LaserOn delay takes the Q-Switch delay into account instead of the FirstPulseKiller signal.
B: Circular arcs with Sky-Writing mode 2	excelli*SCAN* with auto delays activated only: The pre run position has been calculated wrong. This could lead to a hard jump.

DSP-Program RTC6OUT.out Version 611 to Version 612

(Intermediate version 612 wasn't an official release)

N: Real-time clock	RTC6eth only: time_update also programs the real-time clock.
N: time_control_eth	Fine-tunes offset and frequency of the real-time clock.
N: load_z_table_no	Loads ABC values to table No. They are then toggled by select_cor_table. load_z_table is synonymous to load_z_table_no(A, B, C, 0).
N: uart_config	Configures the UART interface (previous RS232).
C: Global coordinate trans-formations (virtual image field)	Now also available with set_fly_x and set_fly_y.
C: Automatic laser control	Factor-4 overflow replaced by clipping.
N: wait_for_encoder_mode, wait_for_encoder_in_range_mode	Selectable between PreviewTime corrected and direct encoder values (excelli*SCAN* only).
B: set_defocus_offset[_list]	Offset values were not used.

DSP-Program RTC6OUT.out Version 612 to Version 613

(Intermediate version 613 wasn't an official release)

B: get_table_para	Returned only values for tables 1-4, not for 5-8.
C: Global coordinate trans-formations (virtual image field)	Now in general available, even without "Processing-on-the-fly" application. Can be explicitly deactivated.
B: para_-commands with Ctrl = 7	Defocus is multiplied by 16 in RTC4/5 mode.
C: set_vector_control	Laser synchroneous output at ports 1, 2, 3, 6.

DSP-Program RTC6OUT.out Version 613 to Version 614

B: activate_fly_2d_encoder, activate_fly_xy_encoder	Encoder offset values were not used.
N: load_fly_2d_table, init_fly_2d	XY-table encoder compensation now implemented. 2 tables are available. init_fly_2d(OffsetX, OffsetY, No) with change of signature: parameter No.
“Processing-on-the-fly”	Completely implemented for excelli*SCAN*.
C: set_wobbel_mode	Mode 3: “Freely definable wobbel figure” with different power modulation.
B: Timed circular arcs with Sky-Writing mode 2	excelli*SCAN* with auto delays activated only: The pre run position has been calculated wrong. This could lead to a hard jump.

DSP-Program RTC6OUT.out Version 614 to Version 615

B: Automatic laser control	An incorrect power output was calculated for a combined galvanometer and encoder speed.
C: range_checking	New: Mode 2: a simulate_ext_stop is forwarded to all slave boards.

DSP-Program RTC6OUT.out Version 615 to Version 616

N: Laser control	SubCycleSwitching, only for laserDESK and RTC6AddOnDll

DSP-Program RTC6OUT.out Version 616 to Version 617

B: set_fly_limits, set_fly_limits_z get_marking_info	User FlyLimits were too large by a factor of 32. Accordingly, fly over/underflows were not recognized.
C: get_startstop_info	Bit #14 indicates whether the laser is enabled (1 to enable_laser, 0 to disable_laser).
N: store_timestamp_counter, store_timestamp_counter_list	Stores the current TimestampCounter value on the board.
N: wait_for_timestamp_counter	Pauses the list execution until the specified Offset TimestampCounter to the stored value is reached.
N: “Fly Extension”	Commands for generic control of "processing on the fly". Encoders and axes can be freely assigned.
N: Global Online Positioning	Coordinate transformations in the virtual image field transmitted through McBSP.
B: Laser control	When combining marks/jumps and microvector commands, the laser sometimes did not switch correctly.
C: set_angle	HeadNo = 4 is now allowed.

C: set_trigger, set_trigger4	Signals 59…62.
B: Automatic laser control	Mode = 1 corrected wrong.
B: set_fly_z, set_fly_x	When calling set_fly_x after set_fly_z the fly correction could be faulty.

DSP-Program RTC6OUT.out Version 617 to Version 618

N: Standalone	Ethernet cards can now be operated in standalone mode.
C: store_program	New Mode > 1, stores data for “Standalone Full State”.
N: set_eth_boot_control	(De-)activates automatic booting in standalone mode.
N: eth_boot_dcmd, set_eth_boot_timeout	Commands to configure the standalone boot sequence.
N: read_image_eth, write_image_eth	Commands to clone boot images.
B: set_ellipse	For specific values the marking of ellipses could get stuck.
B: set_angle	With Head 4 the transformation sometimes was not applied.

DSP-Program RTC6OUT.out Version 618 to Version 619

B: set_default_pixel	The default pixel was not output in extended mode (channel = 21).
N: wait_for_timestamp_counter_mode	Like wait_for_timestamp_counter. Parameter mode defines the behavior when the counter has already expired.
C: get_startstop_info	Bit #5 indicates whether the start time at wait_for_timestamp_counter_mode has already expired.
B: para_mark_abs para_mark_abs_3d para_mark_rel para_mark_rel_3d	For null-vectors (no position change) changes of the signal parameter were not output. The immediately following para command could produce wrong parameter outputs.
B: release_wait	Sometimes list execution was not continued after release_wait.

DSP-Program RTC6OUT.out Version 619 to Version 620

B: periodic_toggle	Output to the ports did not work.
B: periodic_toggle_list	Output to the ports did sometimes not work.

DSP-Program RTC6OUT.out Version 620 to Version 621

B: load_z_table_no	With assigned 3D correction table and No != 0 the ABC values were not written correctly.

DSP-Program RTC6OUT.out Version 621 to Version 622

N: eth_configure_link_loss	Link loss can now be detected on ethernet cards. This command sets the behavior when a link loss is detected.

DSP-Program RTC6OUT.out Version 622 to Version 623

C:	Internal changes only.

DSP-Program RTC6OUT.out Version 623 to Version 624

N: get_timestamp_long	Reads the 64-bit TimestampCounter from the card.
N: wait_for_timestamp_counter_long	Waits for an absolute 64-bit TimestampCounter value during list execution.

DSP-Program RTC6OUT.out Version 624 to Version 625

B: load_correction_file	When loading correction tables with No >= 3, the card got stuck in INTERNAL-BUSY state.

DSP-Program RTC6OUT.out Version 625 to Version 626

C:	Internal changes.

DSP-Program RTC6OUT.out Version 626 to Version 627

C:	Internal changes.

DSP-Program RTC6OUT.out Version 627 to Version 628

B: Timed mark/jump commands	An incorrect speed value was used for the calculation of laser delays.
B: set_io_cond_list clear_io_cond_list	Sometimes bits could be overwritten by following outputs on the same port.
B: regulation3	Laser frequency and pulse length were not updated properly upon changing encoder frequency.

DSP-Program RTC6OUT.out Version 628 to Version 629

B: wait_for_encoder, wait_for_encoder_mode, wait_for_encoder_in_range, wait_for_encoder_in_range_mode, wait_for_mcbsp	It could happen that subsequent jump/mark commands were not executed correctly.
N: clear_fly_overflow_ctrl	Like clear_fly_overflow but a control command.

DSP-Program RTC6OUT.out Version 629 to Version 630

B: laser_on_list	In combination with sky writing mode 2/3, the LaserOn signal sometimes wasn't switched off.
B: regulation3	Wobbel output was ignored in regulation3 mode.

DSP-Program RTC6OUT.out Version 630 to Version 631

B: set_multi_mcbsp_in_list	In some situations the command could be repeated indefinitely during list execution.
N: set_wobbel_control	New control parameter (Ctrl = 8) for alternating power variation of ANALOG OUT1 and ANALOG OUT2.

DSP-Program RTC6OUT.out Version 631 to Version 632

B: load_list	In some situations the wrong list was loaded for ListNo = 3.
B: load_program_file	In some situations a wrong error code was returned for ethernet errors.
B: set_auto_laser_control	For Mode = 50 the output of the Laser1 signal stopped too early at the end of a list.
B: SCANahead	Sometimes the LaserON signal was not switched correctly for very short vectors with AutoDelays.

N: get_temperature	New command to read the temperature of the card.
N: set_wobbel_vector_2	New command for alternating laser power variation with freely definable wobbel shapes.

DSP-Program RTC6OUT.out Version 632 to Version 633

C: set_mcbsp_out_ptr	New parameter Number (Bit 31): The LaserON status is output in every cycle with bit 31 of the McBSP value.
N: set_mcbsp_out_ptr_list	Like set_mcbsp_out_ptr but a list command.
C: enduring_wobbel	Now works with *SCAN*ahead autodelays.
B: load_fly_2d_table	The corrected encoder values were not calculated correctly.

DSP-Program RTC6OUT.out Version 633 to Version 634

C: General	Runtime optimizations.
B: laser_on_list	With *SCAN*ahead autodelays the LaserON signal could be output incorrectly.
B: Coordinate Transformations	For all transformation commands with parameter at_once = 2 the z output value could be calculated incorrectly.
B: set_multi_mcbsp_in_list	Repeated calls could lead to a hard jump.
N: set_mcbsp_out_oie_ctrl, set_mcbsp_out_oie_list	New McBSP output mode for OIE applications (see manual).
N: set_controlpreview_compensation_ctrl	New command to compensate the ControlPreview time of a scan head.

DSP-Program RTC6OUT.out Version 634 to Version 635

N: write_port_list	New command to output analog/digital values. With the parameter NoDelay the value can be output before the PreviewTime elapsed.

DLL RTC6DLL.dll Version 600 to Version 601

N:	Initial.
N: set rtc6_mode	All Z coordinates are handled as 20 bits as with X and Y (default). set_rtc5_mode: All Z coordinates have 16 bits only (RTC5 compatibility).
C: load_program_file	Procedure changed (see manual).

DLL RTC6DLL.dll Version 601 to Version 602

N: set_laser_power, peripheral outputs to control laser power	The laser power can be set by set_laser_power synchronous to the LaserOn delay. This supports long LaserOn delays with short vectors as well as the excelli*SCAN* scan head.
B: set_verify	Possibly the verify check failed.
B: auto_cal	Is now available. Error code 8 now means flash error.
C: set_auto_laser_control	Mode = 6: automatic laser power control with combined galvanometer and encoder speed. Mode <n>+16: excelli*SCAN* support. Mode <n>+32: Correction file-dependent galvanometer speed correction (converting from angle bits to image field bits).
B: rs232_write_data	The command could have sent false data.
C: Import declarations for C/C++	ULONG_PTR is now defined as a function of _WIN64. WIN32 is already used by WINDOWS elsewhere.

DLL RTC6DLL.dll Version 602 to Version 603

C: set_laser_delays,	LaserOnDelay and LaserOffDelay are now handled with a resolution of 1 bit = 1/64 µs (set_rtc6_mode). set_rtc5_mode (RTC5 compatibility): Resolution 1 bit = 0,5 µs.
C: set_sky_writing, set_sky_writing_para	LaserOnShift is now handled with a resolution of 1 bit = 1/64 µs (set_rtc6_mode). set_rtc5_mode (RTC5 compatibility): Resolution 1 bit = 0,5 µs. TimeLag is always handled with a resolution of 1/64 µs.
B: set_pixel_line	Did not reset the z step size back to 0.
B: get_galvo_controls	Returned wrong data.

DLL RTC6DLL.dll Version 603 to Version 604

(Intermediate version 604 wasn't an official release)

N: in general	Support for RTC6eth implemented.
N: set_pixel_line, set_pixel_line_3d, set_pixel, set_n_pixel	Generalized pixel mode with optional outputs at AnalogOut1, AnalogOut2, pulse length, 8-Bit port, 16-Bit port and frequencies up to 3.2 MHz.

DLL RTC6DLL.dll Version 604 to Version 605

(Intermediate version 605 wasn't an official release)

C: set_scanahead_params, get_scanahead_params	Import declarations: Parameter Amax is now of type double.
N: excelliSCAN	excelli*SCAN* with firmware version ≥ 5.05.7 is supported.
C: set_control_mode	Bit #4 = 1 suppresses simulate_ext_start_ctrl.
N: get_bios_version	Returns the bios version of the board.
C: stepper_disable_switch	Suppresses the functionality of an end switch, for example, with rotating axes.
C: set_rtc6_mode	The Z position inputs are now resolved with 20 bits, as with X and Y. set_rtc5_mode restores the RTC5 compatible 16-bit resolution.
N: Options	SCANa = 16 activates the excelli*SCAN* support. UFPM = 32 activates pixel mode frequencies above 800 kHz.
C: periodic_toggle	Endless toggling with period = 4294967295.

DLL RTC6DLL.dll Version 605 to Version 606

B: auto_cal	Also available for RTC6eth.
C: Master/Slave	Now available.
N: RTC6eth support	Now available (as of bios version 0x21 or higher). New RTC6eth commands see RTC6 manual.
N: get_bios_version	Returns the current bios version (as of bios 0x21).

DLL RTC6DLL.dll Version 606 to Version 607

C: set_trigger	Signal = 52 added: Time stamp counter.
B: set_scanahead_params	Amax is clipped to (>1/256).
B: load_program_file	Memory leak removed.
B: get_z_distance	False Z values with set_rtc4_mode and set_rtc5_mode.

DLL RTC6DLL.dll Version 607 to Version 608

N: eth_get_error	Returns accumulated Ethernet errors.
N: eth_check_connection	Checks whether an Ethernet connection exists and the RTC6eth board responds.
N: eth_get_ip_search	Returns the IP address of an RTC6eth board from the search result list.
N: eth_get_serial_search	Returns the serial number of an RTC6eth board from the search result list.
B: Loading tables, such as load_varpoly_delay	The DLL could have thrown an exception.
C: load_program_file	Performs a version check for RTC6eth boards too.
C: eth_convert_ip_to_string, eth_convert_string_to_ip	Now also execute without prior calling init_rtc6_dll.
B: load_sub, load_char, load_text_table	These commands were rejected (error 64), even if the protected memory area (“List3”) was set to a finite value.
B: set_verify	Now works for list commands as well.
B: save_disk, load_disk	The binary file could possibly be kept open as long as the application was active.
B: eth_get_ip	Functioned only for the default board.

DLL RTC6DLL.dll Version 608 to Version 609

B: eth_check_connection	Returned false values > 0 for some errors.
B: Windows service	The RTC6 can now also be used with a Windows service.
C: Import declarations	RTC6impl.h, RTC6expl.h, RTC6expl.c, RTC6impl.hpp are prepared for non-Windows operating systems.
C: Import declarations set_pixel, set_n_pixel	Parameters PulseLength and AnalogOut are renamed to PortOutValue1 and PortOutValue2.
C: Correction files	The optional command number_of_correction_tables limits the user-defined number of allowed correction tables to less than 8.
N: set_pause_list_cond	Defines the NOT-condition at EXTENSION 1 16-bit digital input for an automatic pause_list command.
N: set_defocus_offset, set_defocus_offset_list	Globally effective offset to all defocus settings.
N: list_call_repeat, list_call_abs_repeat	Like list_call or list_call_abs, but with arbitrary repetition.
C: set_trigger, set_trigger4, get_value, get_values	Signals 53 (wobbel amplitudes) and 54 (I²C-AnalogIn) as well as 55, 56, 57 (fly correction) added.

C: get_sync_status	Now in addition to the master/slave synchronization status also error bits are returned.
N: master_slave_config	Configures the master/slave connection of a board.
C: Automatic laser control	set_auto_laser_control, set_auto_laser_params[_list] with Ctrl = 7: geometrically constant spot distance, for excelli*SCAN* systems only.
N: spot_distance, spot_distance_ctrl	Defines the to-be-controlled constant geometrical spot distance.
N: set_port_default_list	Like set_port_default, but a list command.
B: set_scanahead_params	Error 3 (no excelli*SCAN* active) was not returned.
B: load_fly_2d_table, load_stretch_table	Both tables didn't load with RTC6eth.
C: auto_cal	Doesn't write back data to the board, if presumably incorrect data have been read out before (at boot time).
C: Virtual image field	The virtual image field is now as big as ±28 bits.
C: set_matrix	Value range for coefficients with HeadNo = 4: ± 2.0.
C: simulate_ext_start_ctrl	Now waits internally for 30 µs until the list has really started (provided, it is allowed).
B: Import declarations	Some function definitions of the next release are erroneously included here. WorkAround: Simply delete them from the import declarations, especially from RTC6Wrap.cs and RTC6expl.h and ~.c.

DLL RTC6DLL.dll Version 609 to Version 610

N: set_pause_list_not_cond	Defines the NOT-condition at EXTENSION 1 16-bit digital input for an automatic pause_list command. C: A conditional pause_list takes precedence over stop_execution.
N: set_scanahead_speed_control	Controls scanner delays depending on the target or actual achievable speed.
N: activate_fly_xy_encoder, activate_fly_2d_encoder	Activates a Processing-on-the-fly session with an encoder offset.
C: set_trigger, set_trigger4	Period < 31 bits, bit #31 = 1 activates endless triggering with ring buffering.
N: get_waveform_offset	Reads data beginning with position Offset.
N: create_dat_file	Creates a current version DAT-file that includes user-definable tables.
B: get_encoder, read_encoder, wait_for_encoder	As of version RBF 614 FlyScale-scaled encoder values have been returned or used.

DLL RTC6DLL.dll Version 610 to Version 611

B: get_scanahead_params	As of version DLL 610 the verification of excelliSCAN type scan head failed.
B: set_scanahead_params	As of version DLL 610 mode = 1 did not work because of the error in get_scanahead_params. Mode = 2 scaled image field velocitiies and accelerations wrong because of erroneous correction file evaluation.
B: get_z_distance	Used current Z position instead of the Z parameter.
B: Automatic laser control, load_position_control	Because of a reconstruction of the position dependent laser control to an excelli*SCAN* compatible version the automatic laser control scaled wrong, as long as the position table has not been loaded explicitly (see RTC6DAT.dat version 603).
C: mark_ellipse_abs, mark_ellipse_rel	Ellipses can now also be executed with *excelliSCAN* in sky-writing mode.
B: RTC6eth	A stored static IP address was returned with 0 if FORCE_DHCP was set. If UDP packets were lost, the board could possibly no longer be addressed via Ethernet.
N: RTC6eth	If FORCE_DHCP is set and no IP address is assigned within 60 seconds after Power-On, a link-local address (169.254.1.0/16) is automatically used.

DLL RTC6DLL.dll Version 611 to Version 612

(Intermediate version 612 wasn't an official release)

N: Real-time clock	RTC6eth only: time_update also programs the real-time clock.
N: time_control_eth	Fine-tunes offset and frequency of the real-time clock.
N: load_z_table_no	Loads ABC values to table No. They are then toggled by select_cor_table. load_z_table is synonymous to load_z_table_no(A, B, C, 0).
C: load_program_file	New return values: 11, 14, 16, 17, 18, see manual.
N: uart_config	Configures the UART interface (previous RS232).
C: Global coordinate trans-formations (virtual image field)	Now also available with set_fly_x and set_fly_y.
C: Automatic laser control	Factor-4 overflow replaced by clipping.
N: wait_for_encoder_mode, wait_for_encoder_in_range_mode	Selectable between PreviewTime corrected and direct encoder values (excelli*SCAN* only).
B: set_defocus_offset[_list]	Offset values were not used.

DLL RTC6DLL.dll Version 612 to Version 613

(Intermediate version 613 wasn't an official release)

B: get_table_para	Returned only values for tables 1-4, not for 5-8.
C: Global coordinate trans-formations (virtual image field)	Now in general available, even without "Processing-on-the-fly" application. Can be explicitly deactivated.
B: para_-commands with Ctrl = 7	Defocus is multiplied by 16 in RTC4/5 mode.
C: set_vector_control	Laser synchroneous output at ports 1, 2, 3, 6.
B: load_program_file	RTC6eth only: return value 9 with RTC6eth.out error.

DLL RTC6DLL.dll Version 613 to Version 614

B: activate_fly_2d_encoder, activate_fly_xy_encoder	Encoder offset values were not used.
N: load_fly_2d_table, init_fly_2d	XY-table encoder compensation now implemented. 2 tables are available. Init_fly_2d(OffsetX, OffsetY, No) with change of signature: parameter No.
C: "Processing-on-the-fly"	Completely implemented for excelli*SCAN*.
C: set_wobbel_mode	Mode 3: "Freely definable wobbel figure" with different power modulation.
C: set_pixel_line, set_pixel_line_3d	Sky-Writing mode.

DLL RTC6DLL.dll Version 614 to Version 615

C: eth_set_com_timeouts, eth_get_com_timeouts	Pure DLL settings are now also possible without access to an Ethernet board.
C: range_checking	New: Mode 2: a simulate_ext_stop is forwarded to all slave boards.
C: save_disk/load_disk	Now with version control.
C: sync_slaves	Now no longer has any function (see RBF 619).

DLL RTC6DLL.dll Version 615 to Version 616

N: Laser control	SubCycleSwitching, only for laserDESK and RTC6AddOnDll.
B: load_jump_table_offset	The automatic determination did not work.

DLL RTC6DLL.dll Version 616 to Version 617

B: set_pixel_line, set_pixel_line_3d	Pixel Mode with Channel 21 (Port 5 + Mode 16) did not work. Pixel output for PulseLength was not applied.
B: load_list	For the parameter ListNo 3 the USED status may have been reset in the wrong list.
C: get_startstop_info	Bit #14 indicates whether the laser is enabled (1 after enable_laser, 0 after disable_laser).
N: store_timestamp_counter, store_timestamp_counter_list	Stores the current TimestampCounter value on the board.
N: wait_for_timestamp_counter	Pauses the list execution until the specified Offset TimestampCounter to the stored value is reached.
N: “Fly Extension”	Commands for generic control of "processing on the fly". Encoders and axes can be freely assigned.
N: Global Online Positioning	Coordinate transformations in the virtual image field transmitted through McBSP.
B: acquire_rtc, select_rtc, n_load_program_file	An unhandled exception could occur with RTC6eth boards.
B: get_waveform_offset	Special combinations of offset and length could have led to a blue screen.
B: write_abc_to_file	The checksum in the correction file was not adjusted.
C: set_angle	HeadNo = 4 is now allowed.
C: set_trigger, set_trigger4	Signals 59…62.
B: init_rtc6_dll	When executing simultaneously in different application programs, a program could hang as long as a previously started program was not fully terminated.
B: set_multi_mcbsp_in	In some cases incorrect outputs were generated.

DLL RTC6DLL.dll Version 617 to Version 618

N: Standalone	Ethernet cards can now be operated in standalone mode.
C: store_program	New Mode > 1, stores data for “Standalone Full State”.
N: set_eth_boot_control	(De-)activates automatic booting in standalone mode.
N: eth_boot_dcmd, set_eth_boot_timeout	Commands to configure the standalone boot sequence.
N: read_image_eth, write_image_eth	Commands to clone boot images.
B: store_timestamp_counter, store_timestamp_counter_list, wait_for_timestamp_counter	The commands were not executed.

DLL RTC6DLL.dll Version 618 to Version 619

B: load_program_file	With Ethernet cards it could happen that an exception was thrown.
C: load_sub load_char load_text_table	The input pointer now becomes invalid and the error RTC6_REJECTED is set when the end of list memory 3 in a subroutine is reached.
B: periodic_toggle periodic_toggle_list	The output values for ANALOG_OUT1 and ANALOG_OUT2 were too small by a factor of 16.
C: eth_get_com_timeouts	RTC6_ETH_ERROR is not set anymore if the card is not acquired. 0 for KeepAlive and KeepInterval is returned instead.
C: eth_set_com_timeouts	RTC6_ETH_ERROR is only set if the card is not acquired and KeepAlive/KeepInterval are not equal to 0.
N: wait_for_timestamp_counter_mode	Like wait_for_timestamp_counter. Parameter mode defines the behavior when the counter has already expired.
C: get_startstop_info	Bit #5 indicates whether the start time at wait_for_timestamp_counter_mode has already expired.

DLL RTC6DLL.dll Version 619 to Version 620

B: periodic_toggle	Output to the ports did not work.
B: periodic_toggle_list	Output to the ports did sometimes not work.
N: eth_set_com_timeouts_auto eth_get_com_timeouts_auto	New mechanism to configure UDP timeouts (see command description in the manual).

DLL RTC6DLL.dll Version 620 to Version 621

B: load_z_table_no	With assigned 3D correction table and No != 0 the ABC values were not written correctly.
B: simulate_ext_stop	The following command could sometimes be executed too early.

DLL RTC6DLL.dll Version 621 to Version 622

N: eth_configure_link_loss	Link loss can now be detected on ethernet cards. This command sets the behavior when a link loss is detected.
B: Ethernet	For several commands which are waiting for a response from the card it could happen that the DLL calls never returned.
B: micro_vector_rel_3d	The command was executed with absolute instead of relative coordinates.

DLL RTC6DLL.dll Version 622 to Version 623

B: set_laser_power	An additional latch signal could be issued on the first call to load_program_file.
B: set_scanahead_params	The LaserON signal could be output incorrectly if the command was called without excelliSCAN connected.

DLL RTC6DLL.dll Version 623 to Version 624

N: get_timestamp_long	Reads the 64-bit TimestampCounter from the card.
N: wait_for_timestamp_counter_long	Waits for an absolute 64-bit TimestampCounter value during list execution.

DLL RTC6DLL.dll Version 624 to Version 625

B: load_correction_file	When loading correction tables with No >= 3, the card got stuck in INTERNAL-BUSY state.
B: eth_set_com_timeouts	Timeouts were not detected correctly. In case of a connection loss, a deadlock could occur in the DLL.

DLL RTC6DLL.dll Version 625 to Version 626

C:	Internal changes.

DLL RTC6DLL.dll Version 626 to Version 627

C:	Internal changes.

DLL RTC6DLL.dll Version 627 to Version 628

N: Linux	New linux package für Debian 11 (bullseye).
N: clear_fly_overflow_ctrl	Like clear_fly_overflow but a control command.
B: n_read_image_eth, n_write_image_eth	Instead of the multiboard commands, the singleboard commands were executed.
N: eth_get_standalone_status	New command for status query while the card is booting in standalone mode.

DLL RTC6DLL.dll Version 628 to Version 629

C: Ethernet	Improved acquire/release procedure.

DLL RTC6DLL.dll Version 629 to Version 630

N: set_wobbel_control	New control parameter (Ctrl = 8) for alternating power variation of ANALOG OUT1 and ANALOG OUT2.

DLL RTC6DLL.dll Version 630 to Version 631

B: load_list	In some situations the wrong list was loaded for ListNo = 3.
B: load_program_file	In some situations a wrong error code was returned for ethernet errors.
B: set_auto_laser_control	For Mode = 50 the output of the Laser1 signal stopped too early at the end of a list.

B: SCANahead	Sometimes the LaserON signal was not switched correctly for very short vectors with AutoDelays.
N: get_temperature	New command to read the temperature of the card.
N: load_z_table_20b load_z_table_no_20b write_abc_to_file_20b read_abc_from_file_20b	New commands to load/read/write the ABC coefficients of 3D correction table which have been calculated for a 20-bit focus length value.
N: set_wobbel_vector_2	New command for alternating laser power variation with freely definable wobbel shapes.

DLL RTC6DLL.dll Version 631 to Version 632

B: set_mcbsp_out_ptr	Could throw an exception if a NULL pointer was passed.
C: set_mcbsp_out_ptr	New parameter Number (Bit 31): The LaserON status is output in every cycle with bit 31 of the McBSP value.
N: set_mcbsp_out_ptr_list	Like set_mcbsp_out_ptr but a list command.
B: load_z_table_20b load_z_table_no_20b write_abc_to_file_20b read_abc_from_file_20b	The ABC coefficients were not calculated correctly.

DLL RTC6DLL.dll Version 632 to Version 633

N: eth_set_high_performance_mode	New command to improve download performance of list commands.
N: set_mcbsp_out_oie_ctrl, set_mcbsp_out_oie_list	New McBSP output mode for OIE applications (see manual).
N: set_controlpreview_compensation_ctrl	New command to compensate the ControlPreview time of a scan head.

DLL RTC6DLL.dll Version 633 to Version 634

N: write_port_list	New command to output analog/digital values. With the parameter NoDelay the value can be output before the PreviewTime elapsed.

Auxiliary file RTC6DAT.dat Version 600

N:	Initial (identical to RTC5DAT.dat).

Auxiliary file RTC6DAT.dat Version 600 to Version 601

C:	Data format changed.

Auxiliary file RTC6DAT.dat Version 601 to Version 602

C:	Initialization with user-definable tables.

Auxiliary file RTC6DAT.dat Version 602 to Version 603

C:	New Initialization of the load_position_control table. 603a: Bugfix for load_auto_laser_control table.

Auxiliary file RTC6DAT.dat Version 603 to Version 604

N:	New table for data from set_wobbel_vector_2.

RTC6e

BIOS file RTC6BIOSOUT.out Version xx to Version 21

N: RTC6conf:: FLASH BIOS	This and newer BIOS versions can be on-site updated per software. Older BIOS versions (not readable with get_bios_version) must be updated at SCANLAB.

BIOS file RTC6BIOSOUT.out Version 21 to Version 22

C: Start-up	Time to boot reduced. PC-Motherboards with critical timing conditions “PCIe-Reset to RTC6-PCIe-Link Training Start” may now recognize the RTC6-PCIe board.

BIOS file RTC6BIOSOUT.out Version 22 to Version 23

B: load_program_file	Could fail with program packet < Rev.1.4.1 with error 2 (board not running).

RTC6eth

BIOS file RTC6BIOSETH.out Version xx to Version 22

N: RTC6conf:: FLASH BIOS	This and newer BIOS versions can be on-site updated per software. Older BIOS versions (not readable with get_bios_version) must be updated at SCANLAB.
B: Ethernet	Some timings have been optimized.

BIOS file RTC6BIOSETH.out Version 22 to Version 23

B: load_program_file	Could fail with program packet < Rev.1.4.1 with error 2 (board not running). An on-site upgrade is not possible with program package < Rev.1.3.2.
C: Start-up	Automatic loading of the program files from the NAND memory is temporarily deactivated.

BIOS file RTC6BIOSETH.out Version 23 to Version 24

B: eth_get_static_ip	A stored static IP address was returned with 0 if FORCE_DHCP was set.
B: release_rtc	If UDP packets were lost, the board could possibly no longer be addressed via Ethernet.
N: FORCE_DHCP	If FORCE_DHCP is set and no IP address is assigned within 60 seconds after Power-On, a link-local address (169.254.1.0/16) is automatically used.
C: Ethernet	Improvement of Ethernet communication (sudden disconnections).

BIOS file RTC6BIOSETH.out Version 24 to Version 25

B: get_waveform	Could occasionally provide obsolete data packets (since BIOS 24).

BIOS file RTC6BIOSETH.out Version 25 to Version 26

N: Standalone	Ethernet cards can now be operated in standalone mode.

BIOS file RTC6BIOSETH.out Version 26 to Version 27

B: Standalone	The yellow LED could occasionally flash in error state despite correct standalone boot process.

BIOS file RTC6BIOSETH.out Version 27 to Version 28

N: eth_configure_link_loss	Link loss can now be detected on ethernet cards. This command sets the behavior when a link loss is detected.
B: List execution	Simultaneous execution and writing of list commands could result in exceeding the 10µs clock.

BIOS file RTC6BIOSETH.out Version 28 to Version 29

B: Gateway	The gateway settings from eth_set_static_ip were not used.

BIOS file RTC6BIOSETH.out Version 29 to Version 30

N: eth_get_standalone_status	New command for status query while the card is booting in standalone mode.

BIOS file RTC6BIOSETH.out Version 30 to Version 31

C: Ethernet	Improved acquire/release procedure.

BIOS file RTC6BIOSETH.out Version 31 to Version 32

C: Ethernet	Improved acquire/release procedure.

BIOS file RTC6BIOSETH.out Version 32 to Version 33

B: Ethernet	Internal bugfix in acquire procedure.

BIOS file RTC6BIOSETH.out Version 33 to Version 34

N: eth_set_high_performance_mode	New command to improve download performance of list commands.

BIOS file RTC6BIOSETH.out Version 34 to Version 35

B: eth_set_high_performance_mode	In some situations control commands could cause a UDP timeout.



RTC6conf Version 1.0.1.0 to Version 1.1.0.4

B: General	The program could hang after rebooting cards.
B: General	While storing a static IP configuration, under certain circumstances a wrong IP/netmask could be flashed on the card.
B: General	Underscores in the path of upgrade files (BIOS/Option) could lead to errors.
N: General	The parameters in „Network Settings“ are now saved in an ini file and loaded automatically at program start.

RTC6conf Version 1.1.0.4 to Version 1.1.0.5

B: General	Upgrading options or BIOS failed when upgrade files were not placed in the current working directory.
B: General	Upgrading options or BIOS of RTC6eth could fail RTC6 were present.

RTC6conf Version 1.1.0.5 to Version 1.2.0.0

N: General	The laserDESK Standalone option will now be displayed, if available.
N: General	New button „Erase SA Memory“ to erase standalone program/data.

RTC6conf Version 1.2.0.0 to Version 1.2.1.0

C: Ethernet	Increased timeouts for Ethernet communication.

RTC6conf Version 1.2.1.0 to Version 1.2.2.0

B: General	Failed option upgrades could sometimes display a success message.